

What is claimed is:

1. A system for the processing of citrus juice comprising,
a supply station for supplying a quantity of citrus juice;
5 a packaging station for packaging the citrus juice;
a passage for communicating the citrus juice from said supply station
to said packaging station;
a supply of nitrogen gas; and
a sparger associated with said passage and connected to said supply
10 of nitrogen gas, said sparger introducing the nitrogen gas as numerous small
bubbles to the citrus juice which is being communicated through said passage from
said supply station to said packaging station.
2. The system of claim 1, wherein said sparger is in said passage.
3. The system of claim 1, wherein said sparger is a sintered metal
15 sparger.
4. The system of claim 1, wherein said sparger uses a media capable of
removing 90% of particles of 10 um size and 99% of particles of 16 um from water.
5. The system of claim 1, wherein said system includes at least two tanks
for holding or transferring the citrus juice, said passage communicates the citrus
20 juice between said two tanks, and said sparger introduces the nitrogen to the citrus
juice in the passage between said two tanks.
6. The system of claim 1, wherein said system includes a pasteurization
station and said sparger introduces the nitrogen to the citrus juice just preceding or
in said pasteurization station.
- 25 7. The system of claim 6, wherein said pasteurization station has a heat
exchange surface of reduced size compared to the heat exchange surface
necessary if no sparging occurred just preceding or in said pasteurization station.
8. The system of claim 6, wherein said system further comprises a supply
of heating media for pasteurization, the supply of heating media connected to the
30 pasteurization station and having a reduced temperature compared to the
temperature necessary if no sparging occurred just preceding or in said
pasteurization station.

9. The system of claim 1, wherein said sparger introduces the nitrogen to the citrus juice just preceding and/or in said packaging station.

10. The system of claim 2, wherein said system includes at least two tanks for holding or transferring the citrus juice, and a pasteurization station, said passage communicates the citrus juice between said two tanks, said pasteurization station and said packaging station, and at least one said sparger introduces the nitrogen to the citrus juice in the passage between at least one of said two tanks, said pasteurization station and/or said packaging station.

11. The system of claim 6, wherein at least one said sparger introduces the nitrogen to the citrus juice in the passage between said two tanks, another said sparger introduces the nitrogen to the passage to said pasteurization station, and still another said sparger delivers the nitrogen to said packaging station.

12. A method of processing citrus juice containing substantial levels of dissolved oxygen comprising sparging the citrus juice with numerous small bubbles of gaseous nitrogen.

13. The method of claim 12, wherein the sparging uses a sintered metal sparger.

14. The method of claim 1, wherein the sparging uses a sparger having a media capable of removing 90% of particles of 10 um size and 99% of particles of 16 um from water passing through the media.

15. The method of claim 12, wherein the sparging is of citrus juice which is being communicated between two tanks.

16. The method of claim 12, including pasteurizing the citrus juice, and the sparging is performed just preceding or during the pasteurization.

17. The method of claim 16, wherein the pasteurizing is performed at reduced time or temperature conditions relative to the time or temperature conditions if no sparging occurred just preceding or during pasteurizing.

18. The method of claim 12, wherein the sparging is performed during at least one of while said citrus juice is being communicated between two tanks, just preceding pasteurization and/or packaging.

19. The method of claim 18, wherein the sparging is performed at each of the last mentioned locations.

20. A citrus juice having a dissolved oxygen concentration less than 0.45 ppm.